

At page 112, please replace the Abstract with the following amended Abstract.

Abstract

Materials that are useful for absorption enhanced reforming (AER) of a fuel, including absorbent materials and catalyst materials, and methods for using such materials for the conversion of carbon-based fuels to a H₂-rich product gas. The materials can be fabricated by spray processing. The use of the materials in AER can produce a H₂ product gas having a high H₂ content and a low level of carbon oxides. The method for converting carbon-based fuels to a H₂-rich product gas includes forming an intermediate gas product from the carbon-based fuel using a catalyst and contacting the intermediate gas product with an absorbent to absorb CO₂. The absorbent can be regenerated while retaining a high absorption capacity.